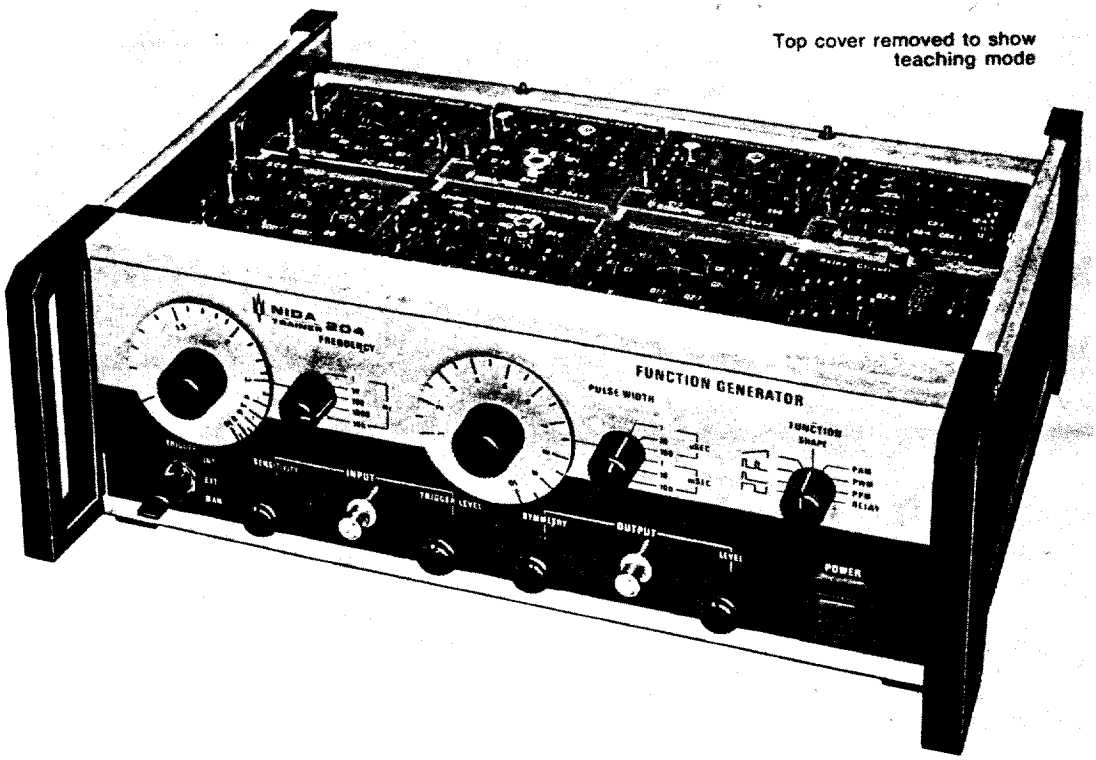
# DIRECTORY OF NAVAL TRAINING DEVICES




Top cover removed to show teaching mode

## FUNCTION GENERATOR TRAINING AID, DEVICE 6B33

TRAINING CATEGORY:

BASIC SCIENCE (Electronic)

ORIGINATING AGENCY:

CNET

SECURITY CLASSIFICATION:

Device 6B33 is unclassified.

INTENDED USE:

The training aid is used to teach electronic students the operation of various electronic circuits and how these circuits are combined to develop a Function Generator.

FUNCTIONAL DESCRIPTION:

Device 6B33 is a solid state classroom type function generator that generates square waves, pulses, and pulse modulation, with integral transformer type power supply.

A five (5) position frequency range control switch controls the frequency of the square wave and pulse generators from 1 Hz. to 100k Hz. in five (5) decades. A variable frequency control provides full control within each selected decade range control.

A six (6) position selector switch selects pulse width from 1 microsecond to 100 milliseconds. A variable pulse width control gives full pulse width range control of each selected range.

A nine (9) position function switch selects the following:

(1) Square wave, controllable from 1 Hz. to 100k Hz. with minimum level of 10V peak.

(2) Pulse, controllable from 1 Hz. to 100k Hz. minimum level of 10V peak and pulse width controllable from 4 microhertz to 100 millihertz.

(3) Double pulse, minimum 10V peak.

(4) Ramp waveform from 1 Hz. to 10k Hz., minimum level 10V peak.

(5) Shape - sinewave is fed into input jack, output rectangular waveform is in sync with sinewave input signal. Pulse width of rectangular waveform is varied by "Input Trigger Level."

(6) Pulse amplitude modulation - output waveform is a series of rectangular waveforms at rate selected by frequency controls and amplitude of pulses vary at rate of lower frequency sinewave fed into input jack. Function is operational over range of 1 Hz. to 100k Hz.

(7) Pulse width modulation - signal fed into input jack will pulse width modulate the internal generated clock signal selected by frequency select switch.

(8) Pulse position modulation - input jack signal will pulse position modulate the internal generated clock signal selected by frequency switch.

(9) Relay - an internal relay switches signal from input jack to output jack. Time period of relay action is determined by frequency select control and pulse width control.

The PC Boards are mounted horizontally with components exposed to students when top or bottom cover is removed.

All parts are identified by schematic number. Test points are located at input and output of circuits so student can readily measure system performance.

PHYSICAL INFORMATION:

5-1/4" High x 15" Wide x 11" Long.
Weight - 12 lbs.

ENVIRONMENTAL CHARACTERISTICS:

Classroom environment

EQUIPMENT REQUIRED (NOT SUPPLIED):

1. Oscilloscope
2. Volt-Ohm Meter

INSTALLATION AREA:

Classroom

POWER REQUIREMENTS:

115 V, single phase, 60 Hz.

PUBLICATIONS FURNISHED:

Device Instruction Manual

PERSONNEL:

Electronic Students.

CONTRACT IDENTIFICATION:

Manufactured by NIDA Corporation, Stamford, CT under NAVTRASYSCEN Contract No. N61339-76-C-0123.

LOCAL STOCK NUMBER:

6910-LL-C00-4524